



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/573,431

03/24/2006

Kim Lui So

SO-7

1987

39705

7590

11/04/2009

LOREN G. HELMREICH

5851 San Felipe

SUITE 975

HOUSTON, TX 77057

EXAMINER

WU, IVES J

ART UNIT

PAPER NUMBER

1797

MAIL DATE

DELIVERY MODE

11/04/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/573,431	Applicant(s) SO, KIM LUI	
	Examiner IVES WU	Art Unit 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 September 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 30-44 and 50-54 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 30-44 and 50-54 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

(1). Applicant's Amendments, Remarks filed on 7/27/2009, Information Disclosure Statements (IDS) filed on 5/26/2009, 9/14/2009 have been received.

Claims 45-49 are cancelled. Total cancelled claims are 1-29, 45-49.

New claims 50-54 are added.

Claims 30-32, 36-37, 39-44 are amended.

The 112 2nd rejection of claims 39-40 in prior Office Action dated 5/11/2009 is withdrawn in view of current Amendments.

A new ground of rejections for claims 30-44, 51-54 is introduced in the following.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

(2). **Claims 39-42** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 39, 41-42 recites the limitation "second filter" in claim 30. There is insufficient antecedent basis for this limitation in the claim.

Claim 40 is rejected due to its subordination.

Specification

(3). The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

In claim 1, it recites: a barrier supported on the casing for extending across a width of the 1st filter. However, it is not supported in Specification literally.

Claim Rejections - 35 USC § 103

Art Unit: 1797

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

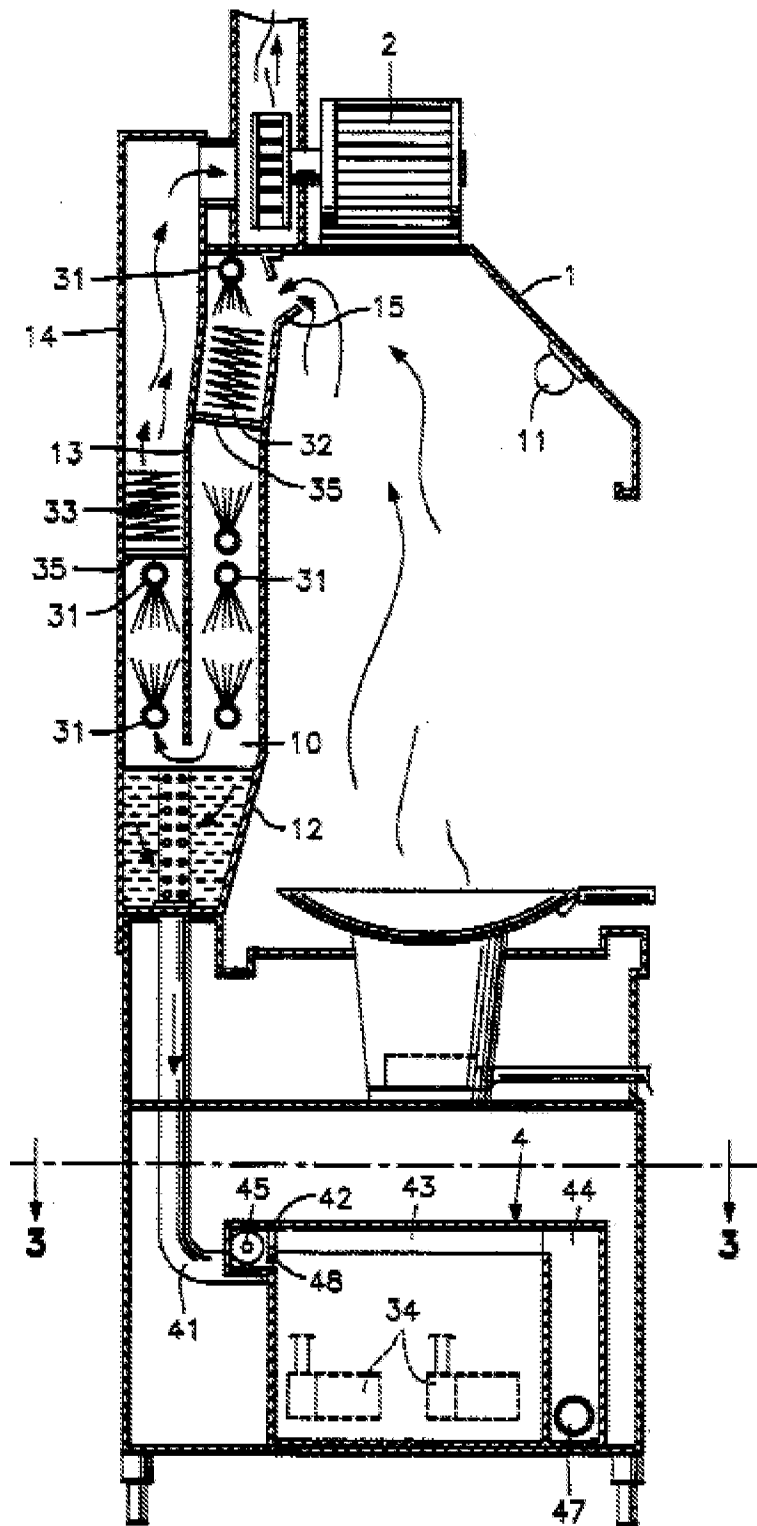
The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

(4). **Claims 30, 34-37, 39-44, 50, 52-54** are rejected under 35 U.S.C. 103(a) as being unpatentable over Hsu (US 5359990A), evidenced by Carraway (US 2342841).

As to a casing configured for positioning within the internal walls of the path of an air flow, the casing housing a 1st filter in a self cleaning filter assembly for use in an exhaust system having a path defined by internal walls for an air flow in **independent claim 30**, Hsu (US 5359990A) disclose oily smoke treating and exhausting device (Title). As shown in the Figure below, U-shaped passage reads on the duct including filter 32 and 33. Air path formed by wall between wall 1 and wall 14. Although Hsu (US 5359990A) **does not teach** the casing within the internal walls, it would be obvious to make a casing houses elements within wall 12 and 14 because making separable is obvious. *In re Stevens*, 212 F.2d 197, 101 USPQ 284 (CCPA 1954). It is well known in the art to locate an air cleaner housing located within flowpath having internal walls as shown by Carraway (Fig. 9, casing 1 in flowpath 109). It would have been obvious to one of ordinary skill in the art at the time of the invention to locate the housing of Hsu in flowpath as shown by Carraway in that such is well known in the art in order to provide air cleaning in an HVAC system.

FIG. 2



As to at least one spray outlet for dispersion of a liquid within the casing, wherein at least one spray outlet forms droplets of the liquid sized for combining with a contaminant to form combined droplets in the air flow, and wherein the 1st filter captures the combined droplets in **independent claim 30**, Hsu (US 5359990A) discloses the two passageways 10, 10 – the 1st one and 2nd one, include a plurality of spray nozzles 31 spray out clean water pumped by water pump 34 from the bottom of a separating tank 43 for cleaning the oily smoke passing through the 1st and 2nd passageways 10, 10 and forcing oil mixed in smoke to mixed with water and drop down owing to its large specific gravity into the separating tank 43 (Col. 2, line 24-33). An upper end of the 2nd passageway 10 is connected with the fan 2, which blows out oily smoke produced, after being showered with water sprayed out of spray nozzles 31, then filtered through the filter plates 32,33 (Col. 2, line 15-19).

As to a barrier supported on the casing for extending across a width of 1st filter to prevent the liquid from dripping from at least one of 1st filter and out from the casing in **independent claim 30**, Hsu (US 5359990) discloses an inlet opening 15 to be provided at top of the front vertical plate 12 for oily smoke to flow into the 1st passageway 10 guided by the housing 1, and the opening being at the top also prevents water in the filter plates 3,3 from flowing out (Col. 2, line 11-15). The bent shape portion of 15 reads on the barrier as claimed.

As to self cleaning filter assembly in **independent claim 30**, the disclosure of reference meets the requirements of the present claims both in terms of the structures and their elements. It is reasonable to presume that the device of reference would fulfill the same utility as self cleaning filter assembly as presently claimed in light of its design similarities. The burden is shifted to Applicant to establish that the self cleaning filter assembly is not the same as or obvious as that set forth by the reference.

As to wherein barrier includes at least one chamber for the containment of the liquid in **claim 34**, as is shown in the Figure above the 1st passageway 10 and its bottom reads on the limitations as claimed.

As to a conduit for fluid drainage of liquid from at least one chamber in **claim 35**, as is shown in Figure above, the 1st passageway 10 also reads on the conduit for drainage.

As to wherein at least one spray outlet dispersing the liquid in an arc of between sixty degrees and one hundred eight degrees relative to a central axis of the spray outlet in **claim 36**, in

Art Unit: 1797

absence of showing criticality of the records, the optimization of area spanned by spraying liquid to be sixty to one hundred eight degrees in a known process render prima facie obvious within one of ordinary skills in the art. *In re Boesch*, 617 F.2d 272, 276, 205 USPQ 215, 219 (CCPA 1980).

As to wherein at least one spray outlet being selected from a group of outlets consisting of a fan jet spray and a nozzle in **claim 37**, Hsu (US 5359990A) discloses spray nozzles 31 (Col. 2, line 38).

As to wherein at least one spray outlet being on an inlet side of one of the 1st filter and a 2nd filter in **claim 39**, as shown in Figures 1 and 2, the spray line 31 with plurality of nozzles which read on the limitations of instant claim.

As to wherein at least one spray outlet being located at each edge of one of the 1st and 2nd filter in **claim 40**; at least one spray outlet being located on opposed corners of one of the 1st filter and 2nd filter in **claim 42**, it would be obvious to have spray outlets being located on opposed corner of filters because rearrangements of parts. *In re Kuhle*, 526 F.2d 553, 188 USPQ 7 (CCPA 1975).

As to wherein at least one spray outlet being located between the 1st filter and a 2nd filter in **claim 41**, as shown in the Figure above, it includes the features as claimed.

As to wherein at least one spray outlet being located within the duct in **claim 43**, as shown in the Figure above, it reads on the limitations as claimed.

As to wherein at least one chamber has at least one baffle therein in **claim 44**, as shown in Figure above, the 1st duct 10 and bent baffle art entrance would read on the limitations as claimed.

As to wherein two chambers are provided within a fixture located before a 1st end of the casing in **claim 50**, as shown in the Figure above the upper part of wall 12 as well as top wall reads on features as claimed.

As to wherein the casing is configured to be positioned at an angle within the internal walls and wherein at least one chamber is configured to capture excess spray in **claim 52**, the intended use is not to be considered as limitation and of no significance in the claim construction.

As to a self cleaning filter assembly for use in an exhaust system having a path defined by internal walls for an air flow comprising a casing configured for positioning within the internal walls of the path of the air flow, the casing housing a 1st filter; at least one spray outlet for dispersion of a liquid within the casing wherein at least one spray outlet forms droplets of the liquid sized for combining with a contaminant to form combined droplets in the air flow and wherein 1st filter captures the combined droplets; a barrier supported on the casing for extending across a width of the 1st filter to prevent the liquid from dripping from 1st filter and out from the casing in independent claim 53, the disclosure of Hsu is incorporated herein by reference, the most subject matters of self cleaning filter assembly components as currently claimed, have been recited in Applicant's claim 30 and have been discussed therein.

As to barrier including at least tow chambers within a fixture for containment of the liquid in **independent claim 53**, as shown in the Figure above, it includes two chambers downstream within the enclosure as the teaching of separable casing is combined.

As to a self cleaning filter assembly for use in an exhaust system having a path defined by internal walls for an air flow comprising a casing configured for positioning within the internal walls of the path of the air flow, the casing housing a 1st filter; at least one spray outlet for dispersion of a liquid within the casing wherein at least one spray outlet forms droplets of the liquid sized for combining with a contaminant to form combined droplets in the air flow and wherein 1st filter captures the combined droplets; a barrier supported on the casing for extending across a width of the 1st filter to prevent the liquid from dripping from 1st filter and out from the casing; the barrier including at least one chamber for the containment of the liquid; the casing is configured to be positioned at an angle within the internal walls in **independent claim 54**, the disclosure of Hsu is incorporated herein by reference, the most subject matters of self cleaning filter assembly components as currently claimed, have been recited in Applicant's claims 30, 34 and 52 and have been discussed therein.

(5). **Claims 31-33** are rejected under 35 U.S.C. 103(a) as being unpatentable over Hsu (US 5359990A) in view of Gustavsson et al (US 4227903), further in view of Metzen et al (US 20020129553A1), evidenced by Copeland (US 4968869).

As to barrier comprising a plurality of louvers that are adjustable between an open position and a closed position, wherein the open position creates openings for air flow into the casing and the closed position closes the openings to form the barrier in **claim 31**, barrier including baffles to retard the air flow in **claim 33**, Hsu (US 5259990A) discloses the inlet opening 15 as shown in the Figure above. Hsu **does not teach** a plurality of louvers to create openings when the exhaust system is operational.

However, Gustavsson et al (US 4227903) **teach** filter cell apparatus. The grating 12 can be made up from lamels 13 and some kind of frame, or can consist of a louvre-punched plate where the **louvers form** the lamels or **baffles** 13 (Col. 2, line 19-21).

The advantage of grating is to give a strong deflection to the raw gas flow, thereby forming a lamella deflection separator (Col. 1, line 66-67).

Therefore, it would have been obvious at time of the invention to modify the inlet of Hsu to have louvre-type grating in order to attain the advantage cited in preceding paragraph.

Both Gustavsson et al, and Hsu **do not teach** louvers that are adjustable between an open position and a closed position as claimed.

However, Metzen et al (US 20020129553A1) **teach** louvre system (Title). A plurality of louvre blades are disposed between, and mounted to the side frame members so as to be rotatable about an axis of rotation (Abstract, line 2-5). It includes closed position ([0005], line 7).

The advantage of rotatable louvre blades is to have the exact position manually controlled so that a desired gap between the blades is obtained to suit the needs for privacy, ventilation, sunshade, or the like ([0002], line 9-13).

Therefore, it would have been obvious at time of the invention to make louvre of Gustavsson et al rotatable as taught by Metzen et al for the inlet of Hsu in order to attain the advantage cited herein above.

As to barrier being slidable into the casing to create an opening into the casing when the exhaust system is operational in **claim 32**, it would be obvious to have the louvre to be slidable because of the design choice, as it is evidenced by Copeland (US 4968869) the slidable louvre.

(6). **Claim 38** is rejected under 35 U.S.C. 103(a) as being unpatentable over Hsu (US 5359990A) in view of McDonald (US 7211551B2).

As to liquid including water and a degreaser in a ratio in the range of from 1:10 to 1:50 in **claim 38**, Hsu (US 5359990A) discloses water spray. Hsu **does not teach** water and a degreaser in a ratio in the range of from 1:10 to 1:50 as claimed.

However, McDonald (US 7211551B2) **teaches** universal cleaner that cleans tough oil, grease and rubber grime and that is compatible with many surfaces including plastics (Title). The cleaning composition includes an oil solubilizing amount of a degreaser, a rubber solubilizing amount of a rubber solvent, and a polar, organic diluent (Abstract, line 7-9). Preferred compositions contain less than 5%, preferably less than 1% and more preferably less than 0.5% water (Col. 7, line 58-60). Cleaning compositions are preferably water-restricted. It has been found that the presence of too much water not only may have a destabilizing effect upon the cleaning composition itself, but also may tend to impair cleaning performance (Col. 7, line 49-53).

The advantage of using universal cleaner is to have tremendous cleaning power, yet to be compatible with many surfaces (Abstract, line 1-2).

Therefore, it would have been obvious at time of the invention to replace the water of Hsu by the universal cleaner of McDonald for the oily smoke treatment disclosed by Hsu because of the advantage cited in preceding paragraph.

(7). **Claim 51** is rejected under 35 U.S.C. 103(a) as being unpatentable over Hsu (US 5359990A) in view of Gustavsson et al (US 4227903), further in view of Metzen et al (US 20020129553A1), Edwards (US 5732507A).

As to wherein the plurality of louvers include a layer of coating for ease of removal of hardened droplets on the plurality of louvers in **claim 51**, Hsu, Gustavsson et al and Metzen et al do not teach the coating on louvers as claimed.

However, Edwards (US 5732507A) **teaches** louvre assembly (Title). An extruded metallic louvre might be coated with paint or the like (Col. 3, line 38-39).

The advantage of coating on the louvre is to protect the surface of louvre as well known in the art.

Art Unit: 1797

Therefore, it would have been obvious at time of the invention to coat the louvre disclosed by Edwards for the louvre of Metzen et al as the inlet of treatment device disclosed by Hsu in order to attain the advantages cited above.

The intended use for ease of removal of hardened droplets is not considered as limitation.

ALTERNATIVELY, CLAIM 30 IS REJECTED IN THE FOLLOWING:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

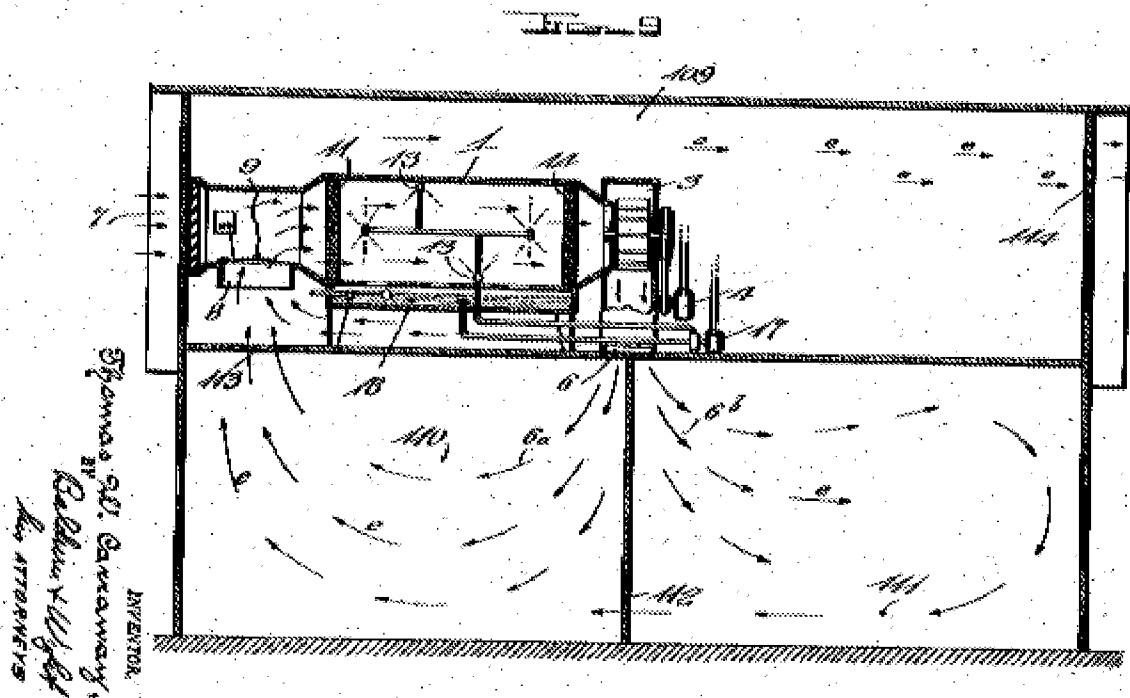
The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

(8). **Claims 30, 36-37** are rejected under 35 U.S.C. 103(a) as being unpatentable over Carraway (US 2342841) in view of Wade (US 4676811).

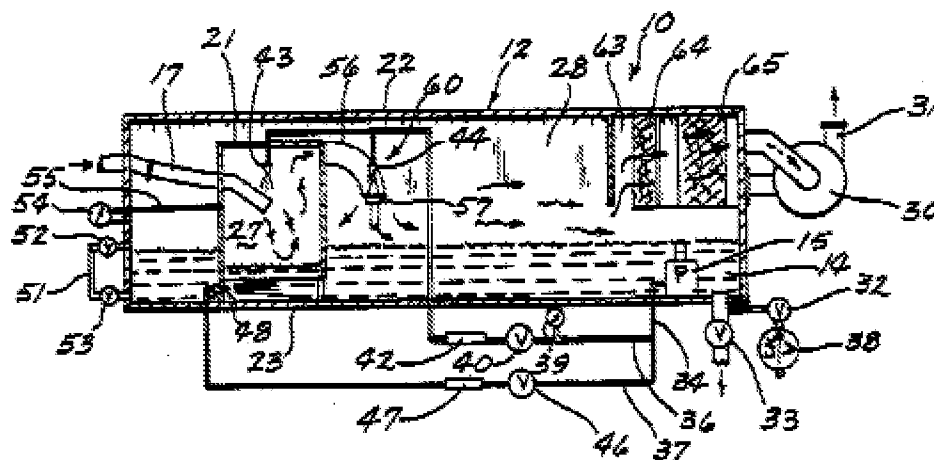
As to a casing configured for positioning within the internal walls of the path of an air flow, the casing housing at least one spray outlet for dispersion of a liquid within the casing wherein at least one spray outlet forms droplets of the liquid sized for combining with a contaminant to form combined droplets in the air flow in a self cleaning filter assembly for use in an exhaust system having a path defined by internal walls for an air flow in **independent claim 30**, Carraway (US 2342841) discloses air conditioning or cooling system (Title). As shown in the Figure below, casing 1; upper attic 109 (path defined by internal walls for an air flow), filter 11, spray nozzles 13, water sump 18, fresh air inlet 7, return air inlet 8 (exhaust air). The spray units 13 would perform the functions as claimed as it is well known in the arts.

Art Unit: 1797



As to casing housing a 1st filter wherein 1st filter captures the combined droplets in **independent claim 30**, Carraway (US 2342841) discloses filter 11, baffle 14. Carraway **does not teach** the filter to capture the droplets formed by spray as claimed.

However, Wade (US 4676811) **teaches** wet air cleaning apparatus (Title). As shown in the figure below, the prefilter 64 and filter 65.



The advantage of these filters is to remove all particles down to 0.03 microns if not smaller. The air is then exhausted through the exhaust and out the outlet as clean and safe breathable air (Col. 3, line 59-64).

Therefore, it would be obvious at time of the invention to have filters of Wade installed next to baffle in the casing of Carraway in order to attain the advantages cited above.

As to a barrier supported on the casing for extending across a width of the 1st filter to prevent the liquid from the 1st filter and out from the casing in **independent claim 30**, as shown in the figure of Carraway above, the baffle 14, which reads on the claim.

As to wherein at least one spray outlet disperses the liquid in an arc of between sixty degrees and one hundred eight degrees relative to a central axis of the spray outlet in **claim 36**, in absence of showing criticality of the records, the optimization of area spanned by spraying liquid to be sixty to one hundred eight degrees in a known process render prima facie obvious within one of ordinary skills in the art. *In re Boesch*, 617 F.2d 272, 276, 205 USPQ 215, 219 (CCPA 1980).

As to wherein at least one spray outlet being selected from a group of outlets consisting of a fan jet spray and a nozzle in **claim 37**, as it is shown in the figure of Carraway (US 2342841) spray nozzles 13.

(9). **Claim 38** is rejected under 35 U.S.C. 103(a) as being unpatentable over Carraway (US 2342841) in view of McDonald (US 7211551B2).

As to liquid including water and a degreaser in a ratio in the range of from 1:10 to 1:50 in **claim 38**, Carraway (US 2342841) discloses water spray. Caraway **does not teach** water and a degreaser in a ratio in the range of from 1:10 to 1:50 as claimed.

However, McDonald (US 7211551B2) **teaches** universal cleaner that cleans tough oil, grease and rubber grime and that is compatible with many surfaces including plastics (Title). The cleaning composition includes an oil solubilizing amount of a degreaser, a rubber solubilizing amount of a rubber solvent, and a polar, organic diluent (Abstract, line 7-9). Preferred compositions contain less than 5%, preferably less than 1% and more preferably less than 0.5% water (Col. 7, line 58-60). Cleaning compositions are preferably water-restricted. It has been found that the presence of too much water not only may have a destabilizing effect

Art Unit: 1797

upon the cleaning composition itself, but also may tend to impair cleaning performance (Col. 7, line 49-53).

The advantage of using universal cleaner is to have tremendous cleaning power, yet to be compatible with many surfaces (Abstract, line 1-2).

Therefore, it would have been obvious at time of the invention to replace the water of Carraway by the universal cleaner of McDonald for the air conditioning and cooling system disclosed by Carraway because of the advantage cited in preceding paragraph.

Response to Arguments

(10). Applicant's arguments with respect to claim 30 in regards to the casing have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to IVES WU whose telephone number is (571)272-4245. The examiner can normally be reached on 8:00 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on 571-272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number: 10/573,431

Page 14

Art Unit: 1797

Examiner: Ives Wu

Art Unit: 1797

Date: October 21, 2009

/Duane Smith/

Supervisory Patent Examiner, Art Unit 1797